

NORTH AMERICAN AND WORLD IRON ORE INDUSTRY OUTLOOK

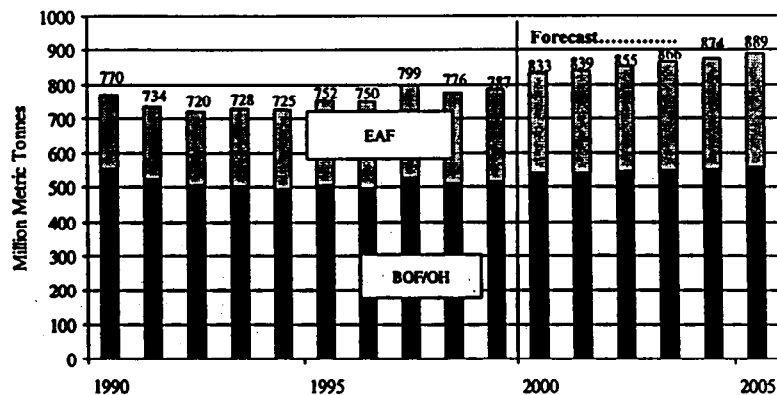
Intertech World Iron Ore Conference
October 9-10, 2000
Chicago, IL

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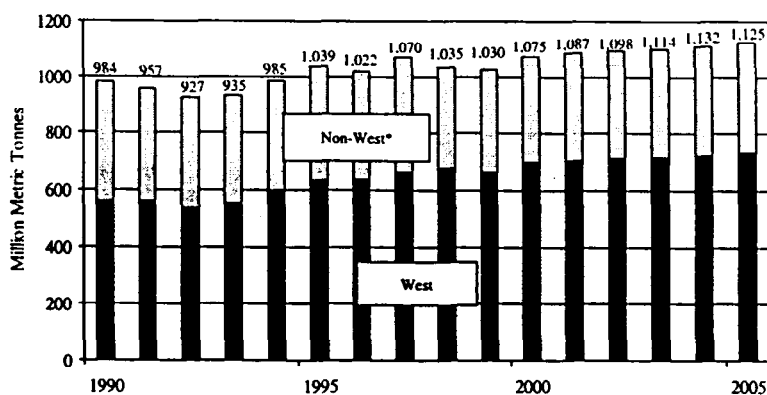
KEY FORECAST ASSUMPTIONS

We expect world crude steel production to increase at 2% per year between 1999 and 2005 with EAF share moving from 34.4% to 37.3%, assuming no EU-15/NAFTA recession.



KEY FORECAST ASSUMPTIONS

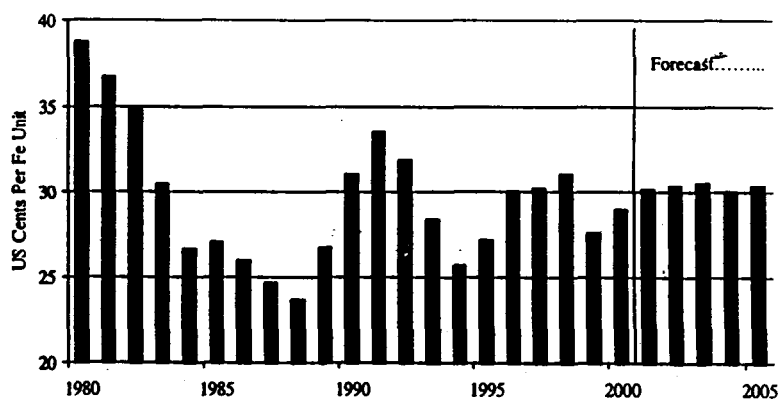
Under the same assumptions, we would expect world iron ore production to increase at a 16 MT annual rate (95 MT or 9% cumulative growth) between 1999 and 2005.



* Non-West includes Former-USSR, Eastern Europe and China.

KEY FORECAST ASSUMPTIONS

Iron ore fines prices increased 4.5% in 2000, and are expected to rise by 3%-to-5% in 2001, and move on a flatter path through 2005.



FORECAST RISKS

A number of risk factors are looming over the world iron ore and steel markets.

- In the near-term, there appears to have been a significant degree of over-production worldwide, resulting in a world export glut and excessive inventory overhangs, with steel prices in many regions (U.S. especially) falling to Asia-crisis lows as of late-2000.
- World oil and energy prices are at/near record highs -- and are likely to stay that way for some time, impacting manufacturing and transport sectors and consumers alike.
- Interest rates are moderate to moderately-high in many regions -- not necessarily a problem by themselves, but in conjunction with other factors, could be a troublesome.
- Wealth effect from earlier soaring stock prices moderating sharply in 2000 with possible impact on consumer sentiment and spending in North America and Europe.
- Still some questions as to whether financial restructuring issues have been adequately addressed in Asia.

KEY ISSUES ADDRESSED

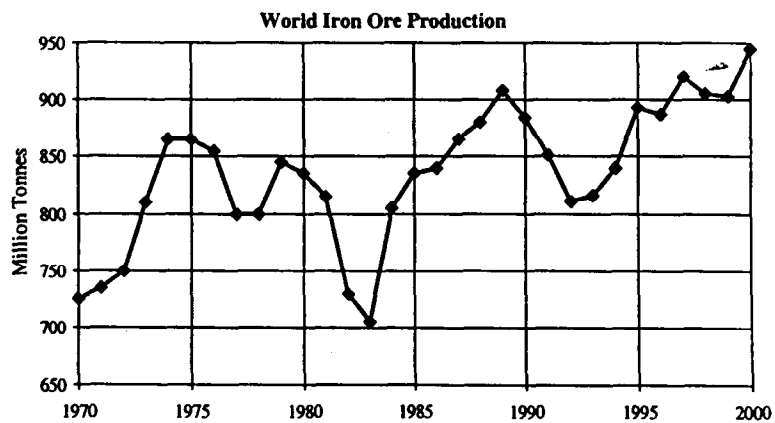
This presentation attempts to address the following issues facing the U.S. and world iron ore industry.

- General U.S. and world iron ore market update and profile.
- Iron and steel industry consolidation -- major changes expected over next 5-to-10 years.
- Potential large changes in merchant slab demand and production.
- Pricing and cost issues, including the impact of exchange rate shifts in Brazil and Australia.
- Inevitable cutbacks in U.S. integrated steelmaking and supporting iron ore industry over next 5-to-10 years.
- Australia's goal of smoothly transitioning away from Brockman lump ores to lower-quality pisolitic ores -- the larger than expected increase this year suggests that this may be doable.
- Future positioning of the Russian iron ore industry.

IRON INDUSTRY UPDATE AND PROFILE

WORLD IRON ORE

World iron ore production has tracked a relatively slow growth pattern, ranging from 800-to-900+ MT (all but 2 years), since the mid-1970s.

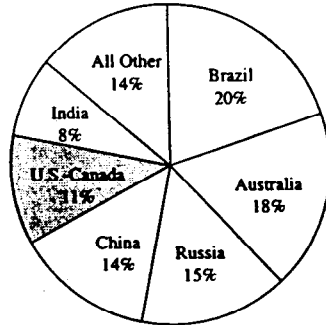


Data includes adjustments to Chinese output due to poor ore qualities by Unctad 1989-present, and MSI 1970-88.

WORLD IRON ORE

Six countries dominate world iron ore production, accounting for 86% of total output.

Total Estimated 2000 Production = 945 MT*



- Brazil and Australia are the largest producers with nearly a 40% combined share of adjusted* world production.
- The U.S. and Canada, as a unit, rank 5th.
- China's ore output has been adjusted downward by over 50% from actual output levels, by one of the primary statistical sources – Unctad – due to low Fe content.

* Data includes adjustments to Chinese output due to poor ore qualities by UNCTAD

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WORLD IRON ORE

The top-10 producing companies accounted for two-thirds of western world iron ore output in 1999, excluding China and East Europe/FSU.

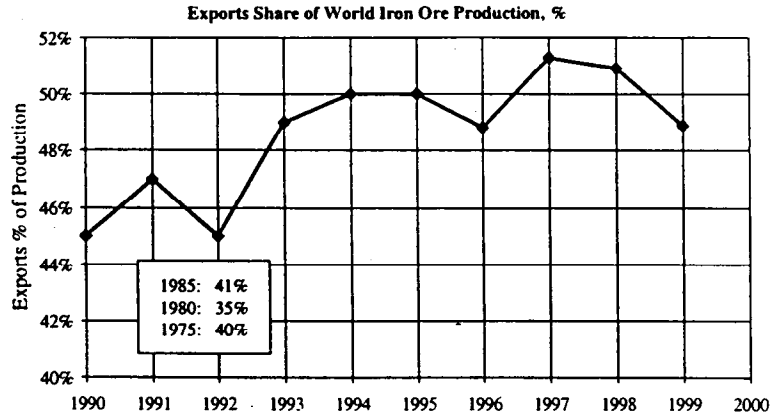
Company	Country(s)	MT
CVRD	Brazil	126.1
BHP	Australia	63.7
Hamersley/RTZ	Australia	54.7
North/RTZ	Australia/Canada	51.9
Cleveland Cliffs	U.S./Canada	36.4
Isacor	S. Africa	23.1
Ferteco	Brazil	19.9
OCM	Canada	14.5
CVG-FMO	Venezuela	13.8
U.S. Steel Minntac	U.S.	13.4
Sub-Total		417.5

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WORLD IRON ORE

Exports as a share of world iron ore output have been on a long-term up-trend, but have declined since 1997 as a result of the Asia crisis.



Data includes adjustments to Chinese output due to poor ore qualities by Unctad 1989-present, and MSI 1970-988.

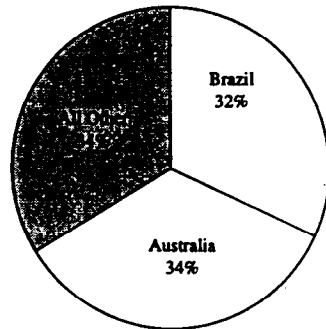
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WORLD IRON ORE

Brazil and Australia dominate the world iron ore export market, accounting for nearly 70% of seaborne exports in 1999.

Total Reported 1999 Exports = 441.4 MT



No country in "All Other" category accounts for more than 7%

Major international merchant exporters:

- Brazil:
 - CVRD
 - Samarco
 - MBR
- India:
 - Kudremukh
- S. Africa:
 - Iscor
 - Assoc. Mang.
- Australia:
 - BHP
 - North (Robe River)
 - RTZ (Hamersley)
- Sweden:
 - LKAB
- Canada:
 - IOC (North)
 - QCM (MBR 50%)

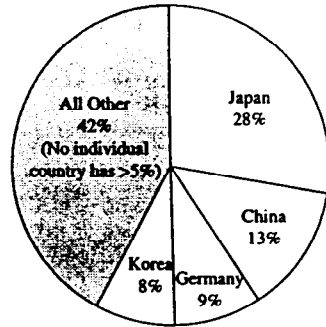
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WORLD IRON ORE

Japan continues to dominate world iron ore importing, with Asia and Europe accounting for 50% and 40% of imports, respectively.

Total Reported 1999 Imports = 433 MT



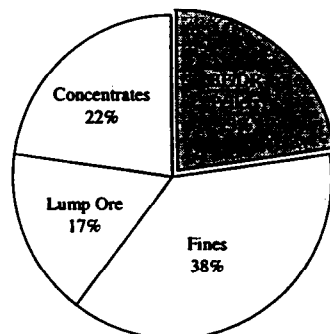
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- Worldwide, four countries (Japan, China, Germany and Korea) account for nearly 60% of all imports.
- Japan accounts for more than 1 in 4 imports: no other country has even half its share of the world market.
- Asia, including Japan, accounts for 50% of all world iron ore imports.
- Western and Eastern Europe accounted for 39% of all world iron ore imports in 1999.
- Combined, Asia and Europe account for 90% of world iron ore imports.
- North America represents a relatively isolated market, with third-country imports accounting for only about 10% of the market.

WORLD IRON ORE

By product type, BF/DR pellets now account for 23% of worldwide iron production capacity.



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- Fines are still the most widely used product at 38% of total in 1999.
- Fines are used in sintering operations whose production is concentrated in Asia as follows:
 - Asia: 50%
 - E. Europe: 21%
 - W. Europe: 20%
 - All Other: 19%
- In sharp contrast to the world market overall, pellets account for 85% of the North American market due the following:
 - The declining regional ore body quality.
 - The decline in the use of sinter plants due to ore quality and environmental factors.

STEEL AND IRON ORE CONSOLIDATION

IRON AND STEEL CONSOLIDATION

This is despite the fact that the world iron ore industry is already relatively concentrated, but is in need of further consolidation.

- Despite perceptions, world iron ore industry (excluding producers North America, China and the former USSR) is relatively concentrated.
- Some 26 companies (including three for India) handle over 400 MT in sea-borne trade with a market value of over \$10 billion per year.
- Australian and Brazilian producers now control nearly 40% of world production (Unctad-adjusted basis) and over 70% of world sea-borne iron ore trade. Given this, recent merger/cooperation discussions among Australian producers and among Brazilian producers involved the creation of such massive forces in the industry, that virtually all producers would have to re-think their positions.
- Changes seem likely in the Brazilian industry where the ownership position of CVRD and various European holdings are in question, and where there is talk of creating another giant miner to rival CVRD – a Caemi (MBR)-Ferteco (Thyssen) alliance – is a possibility.

IRON AND STEEL CONSOLIDATION

But there are obstacles.....

- Significant variations in work rules, environmental laws, political risks and legal and other related matters are perhaps the largest impediments to industry consolidation. Ultimately, consolidation is most often driven by the potential for unit cost reduction which these forces often limit.
- Secondly, the ease of technology transfer and declining market entry barriers are significant deterring factors to greater levels of industry consolidation. Examples of such technologies include alternative iron facilities, thin slab casting and now, thin strip casting. In fact, these factors have led to significant industry fragmentation, especially in the US.
- Lack of sufficient "synergy fit", over-payment for assets and other risks of consolidation. Failed mergers have resulted in some of the largest bankruptcies on record.
- Conflicting investment philosophies of potential acquiring companies.

IRON AND STEEL CONSOLIDATION

Changing face of top-10 world steel companies reflects shift toward greater consolidation

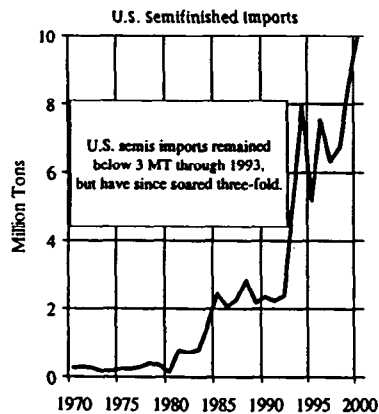
Year	World Output	Top 10 Volume	Top 10 %	# Co. Europe	# Co. Japan	# Co. U.S.	# Co. Korea	# Co. Other	# Co. >20 MT
2005e	885.0	275.0	31.1%	5	1	0	1	3	10
2000e	830.0	207.0	24.9%	5	2	0	1	2	6
1999	787.7	194.1	24.6%	6	2	0	1	1	5
1998	776.4	168.7	21.7%	5	2	1	1	1	3
1995	752.4	150.5	20.0%	4	4	1	1	0	2
1990	770.5	151.4	19.6%	4	4	1	1	0	2
1985	718.9	140.8	19.6%	4	3	2	0	1	1

Million tonnes
Source: Metal Bulletin

STEEL SLAB PLANT DEVELOPMENTS

SLAB PLANT DEVELOPMENTS

U.S. semifinished steel imports (mainly slab) are at all-time high levels as steelmakers exploit purchased slabs as a lower cost alternative to keeping aging equipment in service.



- Semis imports are expected to reach a record high of 10 MT in 2000 -- they were up 25% over the 8.6 MT annual rate of 1999 through the first half of 2000.
- Major, ongoing North American slab buyers:
 - **CSI** - 1.5-2.0 MT, largely from CST-Brazil (partial CSI owner) and Ispat Mexicana, and others, including some from CSN-Brazil in 1999.
 - **AK Steel** - mainly from Imexsa, and some CST.
 - **Ispat-Inland** - mainly through Imexsa which is 100% owned by Ispat.
 - **Wheeling-Pitt** - 50:50 Mexican slab conversion and US hot band sales jv with Imexsa.
 - Rouge, NAS, Weirton, LTV, Beta Steel, Oregon Steel, Dofasco, Lone Star Steel

SLAB PLANT DEVELOPMENTS

There is a significant number of proposed greenfield slab plants targeting North American, Asian and European customers.

Company/ Sponsor	Site Country	Capacity Low	Capacity High
CSN	Brazil	4.0	6.0
CVRD	Trinidad or Columbia	2.5	2.5
Enron	Mozambique	2.0	4.0
Kingsstream	Western Australia	2.0	4.0
Pacific Iron & Steel	Northwestern Canada	1.1	2.2
Acesco	Columbia	2.4	4.8
China Steel/Krakatau	Indonesia	5.0	15.0
Group Total	-	19.0	43.5

SLAB PLANT DEVELOPMENTS

In addition to greenfield plants, nearly 5 MT of incremental merchant slab capacity has been/will be added between 1998-04.

Company/ Sponsor	Site Country	Capacity Added	Related Comments
CST-Tubarao	Brazil	—	Keeping 5 MT via new BF
Imexsa	Mexico	1.0	Expansion to 5 MT incl. degasser
Cosipa	Brazil	1.0	Expanded capacity in 2000
Riva-Piobino	Italy	0.8	Expanded capacity in 2000
Sidor	Venezuela	1.0	Expanded capacity through 2004
Benxi	China	1.0	Expanded capacity in 2000
Group Total		4.8	

IRON ORE COST AND PRICING ISSUES

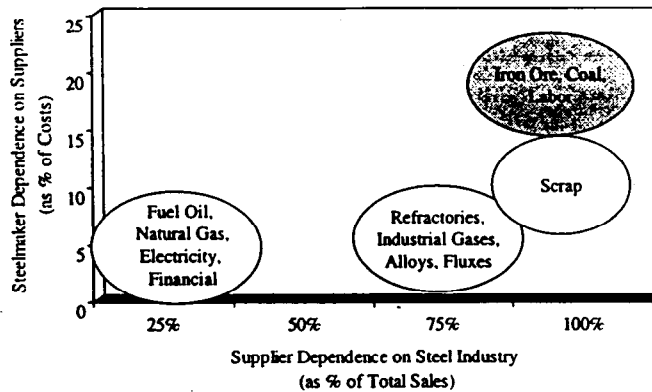
IRON ORE COST AND PRICING ISSUES

World iron ore industry is facing a significant structural transition both internally and with its steel industry customer base.

- Continued iron ore pricing pressures beyond the two recovery increases in 2000 and 2001 (expected).
- Diminishing cost reduction opportunities.
- Consolidation in the more powerful steel and steel-using industries. Iron ore producers will be facing increasing numbers of powerful "mega" steel companies with 20 MT to 30+ MT of capacity each.
- Ongoing shift in regional focus of world steel production.
- Continued significant pressures on traditional integrated steel customer base given the rapid rate of steel and alternative iron technology implementation since 1990.
- Uncertainty as to future course of iron ore requirement-by-type (DR pellet or fines) by alternative iron market.

IRON ORE COST AND PRICING ISSUES

Suppliers on the right side of chart-- including iron ore -- are relatively more exposed to consolidation forces in steel and downstream industries.



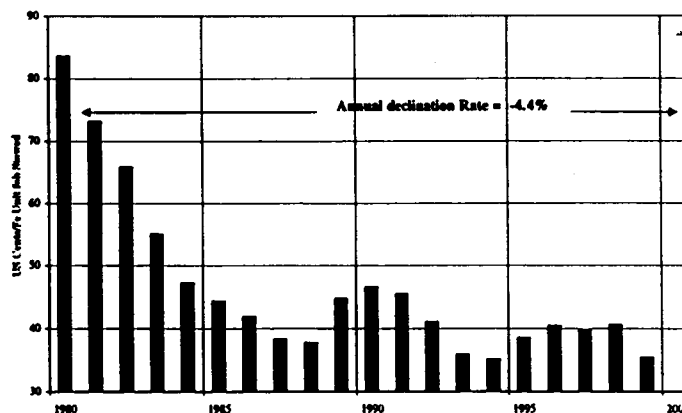
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IRON ORE COST AND PRICING ISSUES

Real iron ore prices have declined by over 4% per year since 1980.

Real (Inflation Adjusted) Brazilian Iron Ore Pellet Price



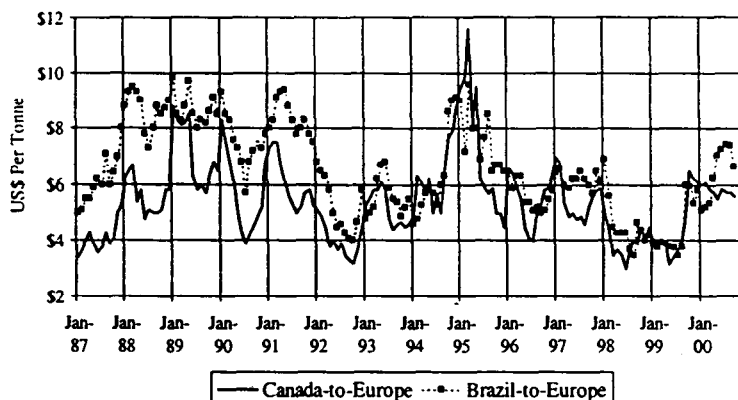
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IRON ORE COST AND PRICING ISSUES

Spot ocean freight rates have ranged from \$3 to \$10 per tonne since the late-1980s and represent an additional 10% to 35% of the base iron ore base.

Representative Iron Ore Spot Ocean Freight Rates



Canada vessels = 80-125 KT DWT, Port Carter to Rotterdam
Brazil vessels = 100-150 KT DWT, Tubarao to Rotterdam

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IRON ORE COST AND PRICING ISSUES

Past 25 years have seen extraordinarily large -- and likely unsustainable -- cost reductions in the iron ore sector. New strategies will be required.

- The stronger iron ore companies have been able to survive this difficult pricing and competitive environment through some or all of the following:
 - Relentless cost cutting.
 - Consolidation (synergy, scale efficiency and enhanced market power).
 - Australia and Brazil now control over 70% of world sea-borne trade
 - Inter-Australia merger or cooperation likely
 - Potential sale of CVRD (Anglo-American, Billiton)
 - Applications of new technology.
 - Doubling or more the size of mining equipment.
 - Improved operating rates and equipment uptime.
 - Improved management and labor practices.

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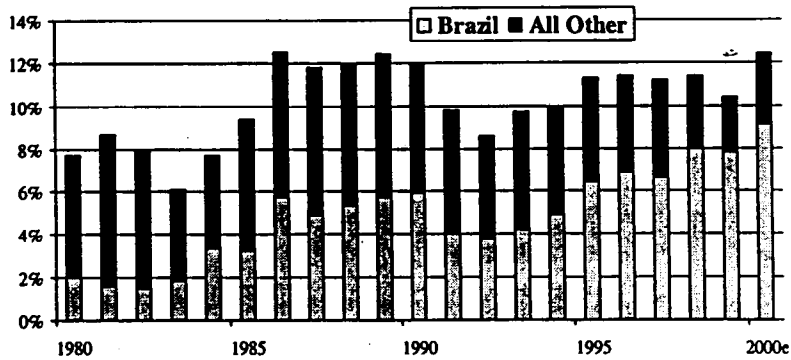
NORTH AMERICAN IRON ORE

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NORTH AMERICAN IRON ORE

Non-North America share of U.S. iron ore market has been on a general up-trend since 1992.



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North American Steel Situation:

There are significant reasons for major industry consolidation.

- US has more than 20 flat rolled producers, significantly more than most other comparable countries or world regions.
- US steel industry is arguably the least consolidated in the world with the top three producers controlling only 26% of the market in 1998.
- US steel industry also unconsolidated relative to many other US manufacturing sectors.
- Steel using customers are consolidating on a global basis (autos, appliances, energy) and looking to limit the number of suppliers. Steelmakers may lose price bargaining power and volume sales if they do not follow suit.
- Recent examples have shown some initial promise -- Ispat has reportedly squeezed Inland's operating costs by over \$100 mn (\$20/ton), mostly through white collar reductions. The company has seen similar cost savings if its raw material sourcing plans are achieved.

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North American Steel Situation (continued):

Potential big changes ahead.

- Possibility of steel sector evolving into only 3-5 U.S. integrators, 5-7 major U.S. minimills, two main Mexican producers (Hylsa and Imsa/Ahmsa/Ispat), and 1 independent Canadian integrator.
- Possible one or two groups of northern Indiana integrated mills based on finished product and blast furnace synergies -- as many as 4 blast furnaces in this area could be shuttered under optimal reconfiguration scenarios. Cleveland/West Virginia area grouping is a possibility.
- Options with U.S. integrated plants or groupings of plants in combination with Canadian producers Stelco and/or Dofasco are possible.
- Ispat could act as a major force of further consolidation within North American market.
- Latin American producers looking seriously at U.S. market entry to by-pass future trade actions and to gain access to key globalizing contract customers. AK Steel possible acquisition candidate of European steelmaker (BS-Hoogovens, Thyssen).

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North American Iron Ore Situation:

In need of re-thinking strategies for long-term performance.

- Only the two Canadian operations are involved in iron ore exporting and, not surprisingly, have international owners, and generally lower cost structures.
- Although remote, there is a possibility of these two companies forming an alliance, although participation of Japanese minority investors would have to be resolved.
- The North American industry may be in need of more radical strategy thinking in order to improve long-term financial performance and shareholder value due to:
 - Declining customer base
 - Lack of exporting
 - Relatively greater minimill impact.

Christopher Plummer holds a Master of Science in International Finance and Industrial Economics and has been active in steel industry research for nearly 20 years. He is the Managing Director of Metal Strategies, Inc. He has consulted with clients on virtually all aspects of the world steel and related industries. Mr. Plummer is one of the more frequently cited steel industry analysts, being regularly quoted in industry trade journals and major publications. He is a frequent guest speaker at steel industry conferences and seminars. He has provided expert witness testimony on various high-profile steel industry litigation and arbitration cases, and has appeared as a recognized expert witness on the world steel industry before the United States Congress. He has authored numerous studies on the world steel industry since the early-1980's and was a contributing co-author to the 10th Edition of the seven-volume ASM International Metals Handbook, 1990. His last two positions over the preceding 10-year period include: Corporate Vice President and Director of World Steel Consulting and Forecasting Services, and Vice President and Director of World Steel Industry Forecasting and Consulting for Chase Manhattan Bank's business forecasting division. He is a member of AISE, ISS, NABE and AFS.